

Listing of Claims:

1. (currently amended) A method of producing a superabsorbent polymer product for use in agricultural applications, comprising:
providing grafting reactants and a starch;
graft polymerizing the grafting reactants onto the starch to form a starch graft copolymer;
saponifying the starch graft copolymer;
precipitating the ~~saponified~~ starch graft copolymer; and
~~granularizing the precipitated starch graft copolymer to forming~~ granules of superabsorbent polymer product ~~sized for use in agricultural applications~~ by pelletizing the starch graft copolymer, the granules having a size that is between about 5 mesh and about 25 mesh and a density that is between about 30 pounds per cubic foot and about 35 pounds per cubic foot.
2. (original) The method of claim 1, wherein the grafting reactants include an initiator and an acrylonitrile.
3. (currently amended) The method of claim 2, wherein the grafting reactants further include a chemical selected from ~~the~~ a group consisting essentially of acrylic acid, acrylamide, and 2-acrylonitrile-2-methyl-propanesulfonic acid.
4. (original) The method of claim 2, wherein the starch and the acrylonitrile are present in a weight ratio of between about 1:2 and about 1:5.
5. (original) The method of claim 2, wherein the initiator is a cerium salt.
6. (original) The method of claim 2, wherein the initiator is ceric ammonium nitrate.
7. (original) The method of claim 1, wherein the starch is selected from a group consisting essentially of pure starches, flours, and meals.
8. (original) The method of claim 1, wherein the starch is a gelatinized starch.
9. (original) The method of claim 1, wherein the starch is cornstarch.
10. (canceled)
11. (canceled)
12. (currently amended) The method of claim ~~10~~ 1, wherein the ~~particle~~ size is between about 8 mesh and about 25 mesh.

13. (original) The method of claim 1, wherein precipitating the saponified starch graft copolymer involves mixing an alcohol with the saponified starch graft copolymer.

14. (currently amended) The method of claim 13, wherein the alcohol is selected from [the] a group consisting essentially of methanol, ethanol, propanol, and isopropanol.

Claims 15-19 (canceled).

20. (original) A superabsorbent polymer product for use in agricultural applications made in accordance with the method of claim 1.

21. (new) A method of producing a superabsorbent polymer product for use in agricultural applications, comprising:

graft polymerizing grafting reactants onto a starch to form a starch graft copolymer;

saponifying the starch graft copolymer;

precipitating the starch graft copolymer; and

forming granules of superabsorbent polymer product by passing the starch graft copolymer through a die plate, the granules having a size that is between about 5 mesh and about 25 mesh and a density that is between about 30 pounds per cubic foot and about 35 pounds per cubic foot.

22. (new) The method of claim 21, wherein the grafting reactants include an initiator and an acrylonitrile.

23. (new) The method of claim 21, wherein the grafting reactants further include a chemical selected from a group consisting essentially of acrylic acid, acrylamide, and 2-acrylonitrile-2-methyl-propanesulfonic acid.

24. (new) The method of claim 22, wherein the starch and the acrylonitrile are present in a weight ratio of between about 1:2 and about 1:5.

25. (new) The method of claim 22, wherein the initiator is a cerium salt.

26. (new) The method of claim 21, wherein the starch is selected from a group consisting essentially of pure starches, flours, and meals.

27. (new) The method of claim 21, wherein the starch is a gelatinized starch.

28. (new) The method of claim 21, wherein the starch is cornstarch.

29. (new) The method of claim 21, wherein the size is between about 8 mesh and about 25 mesh.

30. (new) The method of claim 1, wherein the process of pelletizing includes extruding the starch graft copolymer into strands and grinding the strands to form the granules.

31. (new) The method of claim 1, further comprising:
drying the granules of superabsorbent polymer product.

32. (new) The method of claim 21, further comprising:
drying the granules of superabsorbent polymer product.